

COMPUTER BASICS

Computer – A device that accepts input, processes data, stores data, and produces output

Input – Information fed into the system

Data – Raw material ready for processing

Information – Data that has been processed and turned into useful facts

Processing – To carry out operations on data or programs

Output – Useful information that leaves the system

Memory – Area of the computer that **temporarily** holds data waiting to be processed, stored, or output

Storage – Area of the computer that holds data on a **permanent** basis

Computer program – Instructions that tell a computer what to do

Binary or Base 2 Numbering System – A method for representing letters or numbers using only two digits, 0 and 1 – most basic level of communicating with computers

Bit – Each 0 or 1

Byte – 8 bits

Kilobyte (KB) – 1,000 bytes

Megabyte (MB) – 1 million bytes

Gigabyte (GB) – 1 billion bytes

Terabyte (TB) – 1 trillion bytes

ASCII Code – A number assigned to each letter and character in the alphabet

TYPES OF COMPUTERS

Personal computer or microcomputer – A personal computer based on a microprocessor

Desktop – Personal computer that fits on a desk – more power and storage for less cost than a laptop

Laptop / Notebook – a portable computer – all components contained within the laptop

Workstation – Powerful desktop computer designed for **specialized** tasks

Supercomputer – Very expensive, high-performance computer

Mainframe – Large, expensive computer able to process data for thousands of users at the same time

Server – Provides services to other computers over a network

Smartphone – A cell phone that offers many features including internet access and applications (apps)

Tablet – A wireless, portable personal computer which uses a touchscreen

HARDWARE

Hardware – Physical parts of the computer (mouse, keyboard, printer, CPU)

System Unit – Case that holds and protects the computer components

Microprocessor or CPU (Central Processing Unit) – Brains of the computer

Hertz - measures speed of computer components

Megahertz (MHz) - 1 million cycles per second

Gigahertz (GHz) – 1 billion cycles per second

ROM – Read Only Memory – a chip on the motherboard that holds specific instructions for the computer's operation – permanent, cannot be changed

RAM – Random Access Memory – A computer's **temporary** memory

Boot process – Starting up the computer

Boot sector – A small program on the hard drive that tells the computer how to begin loading programs

Hard Disk – A rigid, magnetic storage device kept inside the computer to hold programs and data

Video Card – Connects the computer to the monitor

Sound Card – Connects the speakers and microphone to the computer

Modem – Connects the computer to a phone line

Network Card – Connects the computer to a network using special cables

Peripheral Devices – Devices connected by cable to the computer (keyboard, printer, camera, etc.)

Maintenance – keeping your computer in a good state of repair

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Input Device – Any device used to input data into the computer

Examples: keyboard, mouse, scanner, microphone

Output Device – Any device used to receive output from the computer

Examples: monitor, printer, speakers, projector

Pixel – The basic unit of an image

Resolution – Amount of pixels on the screen – the more pixels, the better the resolution

Storage Device – A device used to record and store data when the computer is turned off (all disks and drives are storage devices)

CD/DVD – A storage device that uses optical laser technology to record data

Hard disk – A rigid, magnetic storage device kept inside your computer

Flash drive – A small, portable device used for storing data. Usually plugs into a USB port.

External hard drive – A hard drive that is stored outside of the computer in its own case.

SOFTWARE / OPERATING SYSTEM

Software – Computer programs (instructions for the computer)

Operating System software – Software that provides communication between the user, the application software, and the hardware – must have an operating system to run your computer

Examples: Windows, Apple OS

Application software – A program that performs a **specific** function

Examples: word processing, spreadsheet, presentations, a game, a photo program

Platform – Compatible computers - use the same operating system, software, and similar hardware

Multitasking – The ability of the operating system to run more than one program at a time

Windows – An operating system developed by Microsoft for the PC – provides a GUI

GUI – Graphical User Interface – Allows users to control the computer by pointing and clicking at graphical objects such as windows, icons, and menus

Icon – An image that represents a file, folder, or program

Menu – A list or table of options

File – One document or one picture

Folders – A way to organize files into logical and manageable groups

Filenames – In Windows, filenames are given an extension which tells the type of file - .doc (Word), .pdf (Adobe Reader), .jpg (image)

File Properties – Right click on a file to see the properties including size, date created or modified, full name

Save – After the first save, clicking SAVE will automatically replace the old file with the new one

Save As – Always opens the save window allowing you to control where you save and what the name will be

Selecting Files and Folders –

Select All – Ctrl + A OR click and drag around all files

Select Section – Shift + Click will select from the first click to the last click

Random Selection – Ctrl + Click to select items not next to each other

Backup files – Make a copy or save in **two different** hardware locations

Install – Load software onto your computer

Uninstall – Remove software from your computer

Upgrade – Get a newer version of hardware or software

NETWORKS / INTERNET

Network – Computers and devices connected together to communicate or share devices

LAN – Local Area Network – Computers and devices connected within a confined space such as an office

WAN – Wide Area Network – Multiple computers connected over larger geographical areas

VPN – Virtual Private Network – Using a public network to securely access a private network

File Server – A computer that processes requests from clients across a network

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Client – Hardware or software that sends requests to a server

Network Speed – Measured in bits per second (bps)

Firewall – Software or hardware that helps screen out hackers and viruses

Wireless Communication - Uses radio waves to allow devices to exchange data or connect to the internet over short distances.

IP Address – A unique, numerical address assigned to each computer or device on a network – used to locate devices across a network

Internet – A global network of networks

World Wide Web (www) – A collection of web pages you can access through the internet – the www is only **part** of the internet

Website – A connected group of web pages

Web page – One page on a website

Link or hyperlink – A word, phrase, or picture that links or connects you to another website or webpage

HTTP (Hyper Text Transfer Protocol) – The rules used to transfer data over the web

HTML (Hyper Text Markup Language) – The programming language of the web

URL – Uniform Resource Locator – The address of a website, web page or file on the web

Search Engine – A program that searches the web for websites or pages that match keywords

Boolean Operators – AND, OR, NOT - help narrow down a search

Modem – Connects the computer to a phone line

Browser – Application program that allows you to view information on the web and move from location to location
Examples: Internet Explorer, Firefox

ISP (Internet Service Provider) – A company that provides a connection to the internet for a fee

DNS (Domain Name System) – Allows us to use names instead of IP addresses to locate across a network

Common Domain Name Extensions

.com = company, **.edu** = education, **.org** = organization, **.gov** = government, **.mil** = military

Homepage – The first page that opens every time a browser is opened

Favorites – A place to store your favorite or often visited URLs

Plugin – An add-on for a program that adds functionality

Download – Opening or saving a file or program from the internet “down” to your computer

Upload – Loading a file from your computer “up” to the internet

Cookies – A small message sent from a website that keeps track of your preferences

VIRUSES

Virus – a kind of malicious software written intentionally to enter a computer without the user’s permission or knowledge, with the ability to copy itself and continue to spread

Malware – Malicious software

Adware – Automatically displays advertisements

Spyware – Software that enables the user to gain information from your computer without your knowledge

Trigger Event – An event that activates a task

Time Bomb – Watches for a certain date or time to activate a virus

Logic Bomb – Waits for a specific set of input to activate the virus

File Virus – Attaches to an application program or operating system file

Boot Sector Virus – Infects system files your computer needs to start up

Trojan Horse – A computer program that seems to perform one function while actually doing something else

Worm – Virus that spreads from computer to computer, usually through a network

Antivirus Software – Software that attempts to recognize and destroy viruses before they infect your computer

ELECTRONIC COMMUNICATIONS

Email – Electronic mail

Attachment – An electronic file or photo sent with an email message

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Blog – Short for weblog – An online journal or log. Each entry is called a post.

Teleconferencing – A conference between two or more people using telephone lines

Videoconferencing – A video and audio conference between two or more people at different sites

Webcast – Using the web to deliver live or delayed versions of a broadcast.

Webinar – A live presentation transmitted over the web.

Podcast – A digital file downloaded to a computer or portable device and listened to at your convenience.

Subscribing through an RSS feed gives you automatic downloads when a new file is added.

Social Networking – Using social media (like Facebook) to make connections with family, friends, customers, and clients.

Wiki – A collaborative website that allows users to add, modify, or delete content.

DIGITAL CITIZENSHIP

Digital Citizenship – Using technology in a safe, legal, and responsible way.

Netiquette – Proper etiquette used in electronic communication

Spamming – Sending unsolicited electronic bulk messages or junk mail

Flaming – Bashing, insulting, or using profanity on the internet

Cyber-bullying – Using electronic communication to harm or harass in a deliberate, repeated, and hostile manner

Libel – A published, false statement that is damaging to a person's reputation

Slander – A verbal, false statement that is damaging to a person's reputation

Censorship – Suppression of speech or other public communication

Filtering – Keeping out unwanted material such as using a filter to keep children from accessing inappropriate material on the internet

Ethics – Principles of right and wrong that guide behavior

Intellectual Property – A work or invention that is the result of creativity

Copyright – The rights possessed by the owner of information or resources

Creative Commons – Lets you dictate how others may use your work

Trademark – Protecting a name, symbol, or logo so that others cannot use it without your permission. Identified by the TM symbol. (Registering your trademark with the proper government entity may give you more protection and allows you to use the registered symbol)

Piracy – Making illegal copies of CDs, DVDs, movies, music, software, etc.

Plagiarism – Copying someone else's work and claiming it as your own or not giving proper credit to the owner

Software License – A legal contract that defines the ways in which you may use a computer program

Regular software license – Usually allows you to load software on ONE computer

Freeware – Free software – You can use, copy, share but not sell or change

Shareware – Trial software – Use the software for a trial period and then decide whether to purchase it

EULA (End User License Agreement) – A legally binding contract you agree to when you **install** software

AUP (Acceptable Use Policy) – Guidelines on how a network can and should be used

Public Domain – Information available for anyone to copy

Public Information – Can be used without permission

Private Information – Cannot be used without permission

APPLICATION PROGRAMS

PRESENTATIONS / POWERPOINT

Presentation – An electronic slide show

Microsoft PowerPoint – Application program used to create an electronic slide show or presentation

Slide – One screen in a slide show

Design – Style and color of slides (choose a Design Theme for consistency)

Background – The background of one slide may be changed by right clicking on it

Layout – Placement of text and objects on the slides

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Resizing objects – When making an object bigger or smaller use these keys along with the sizing handles

Hold down **SHIFT** to maintain proportions

Hold down **CTRL** to keep the center in the same place

Hold down **SHIFT + CTRL** to do both

Transition – How a slide will enter the screen (can also set automatic timing here)

Animation – Adding movement or an effect to text or objects – controls the order of things entering a slide

View – Normal, slide sorter, outline, notes

Notes – Add notes in a section under the slide – will only appear on the notes page, not on the slide show

Thumbnail – A small, visual representation of a slide or picture

Embed – Adding an item into a file so that it becomes part of the file (such as embedding a video into your slide show)

Printing options – Outline, **handouts** (print several slides on one page), slides, slide thumbnail with notes

WORD PROCESSING

Word processing – An application program to help create documents such as memos, letters, and reports

Microsoft Word – Application program used for word processing

Default settings – The settings that are in place when a program is opened such as margins or font

Word wrap – Letting the program automatically return for you when it reaches the right margin (soft return)

Hard return – Actually pressing the Enter key

Soft page break – Allowing the program to automatically go to the next page when you reach the bottom margin

Hard page break – **CTRL + ENTER** – Forcing a new page

Emphasis – Giving emphasis to text using bold, underline, or italics

Font – Style of text

Line spacing – The number of blank lines between typed lines (single, double, triple, etc.)


Ruler – Number marks across the top of the page – used for margins, indenting, tab stops, and alignment


Horizontal alignment – How text is aligned (lined up) between the left and right margins (left, right, center)

Vertical alignment – How text is aligned between the top and bottom margins (**page center**)

Margins – The white space around the edge of the document

Orientation – Determines whether your document will be printed lengthwise or crosswise

Portrait – lengthwise (the usual default setting) 

Landscape – crosswise 

Cut – CTRL + X – Cut a selection and place it on the clipboard

Copy – CTRL + C – Copy a selection and place it on the clipboard

Paste – CTRL + V – Paste a selection from the clipboard

Clipboard – A **temporary** storage area for a selection that is waiting to be pasted

UNDO – CTRL + Z

Spell Check – Checking for spelling errors – will not find wrong uses of words (their/there), incorrect words (it instead of to) will find words it thinks are misspelled or double words

Grammar Check – Checking for grammatical errors

Thesaurus – Looking up a word to find another word that means the same or the opposite

Tab Stops – Setting places on the ruler line where the tab key will stop

TAB – Press TAB to move from one tab stop to the next

Leaders – Dots, dashes, or lines that fill in the space from tab stop to tab stop

Indent – Lining up a section of text **IN** from the left or right margin

First line indent, left indent, right indent, hanging indent

Hanging indent – A format that keeps the first line of a paragraph at the left margin and indents remaining lines from the left margin. **References use this format.**

Header or Footer – Information that appears on the top or bottom of every page

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References / Bibliography – A list of sources used in a document

Placed at the end of the report, in alphabetical order, in hanging indent format

Template – a document that someone creates as a pattern – it includes all formatting, you just have to add info

Multi-level Lists – Numbered or bulleted lists that have more than one level. Each level is indented further.

Non-printing characters – Formatting marks that do not print with the document

Symbols or Special Characters – Characters that are not found on a standard keyboard such as mathematical symbols, international characters with accents, or symbols like the degree symbol

Rotate – Turning a graphic

Crop – Cutting off parts of a graphic

Resize – Making a graphic smaller or larger

SPREADSHEETS

Spreadsheet / Workbook – A grid of rows and columns containing numbers, text, formulas, and calculations

Microsoft Excel – Application program used to create spreadsheets

Row – Horizontal cells up and down a spreadsheet – represented by numbers (1, 2, 3)

Column – Vertical cells across a spreadsheet – represented by letters (A, B, C)

Cell – Where a row and column intersect (A1, C3, D10)

Active Cell – The cell your cursor is in

Sheet – One page in a workbook

Range – A section of the spreadsheet identified by beginning cell and ending cell (C1:G10)

AutoFit – Adjusts the size of rows or columns to fit the data within those rows or columns

Auto Fill – Click and drag the AutoFill button to automatically copy from one cell to several others

Mathematical operators (+ - * /) – Used to create formulas and calculations

Formula – Use cell addresses and mathematical operators to create a formula – start with =

Functions – A special formula Excel has created for you

SUM – Adds numbers in a range

AVERAGE – Averages numbers in a range

MAX – Finds the highest (max) number in a range

MIN – Finds the lowest (minimum) number in a range

COUNT – Counts the number of cells in a range that contain a number

Relative Address – Cell references (addresses) change as the formula is copied (A4 or C6)

Absolute Address – Cell references (addresses) do not change as the formula is copied. Use the \$ in front of a cell, row, and/or column address to make it absolute (\$A\$4 or \$A4 or A\$4)

Sort – Changing the order of information

Ascending – from A to Z, 0 to 1, or low to high

Descending – from Z to A, 9 to 1, or high to low

Chart or Graph – A visual representation of data

X-axis – Usually the horizontal axis, usually left to right – usually shows the topics of the values

Y-axis – Usually the vertical axis, usually top to bottom – usually shows the range of values

Legend – Key for interpreting the chart's colors, patterns, etc.

DATABASES

Database – A collection of records

Field – One piece of data, the same as a cell in a table – fields are designated by column headings

Record – The same as a row in a table, all of the information about a single item in a table

Modify – Make changes to a record

Query – A question – requesting information from the database